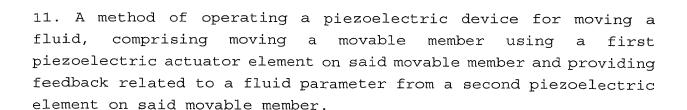


WE CLAIM

- 1. A device for moving a fluid, comprising a movable member having a first piezoelectric actuator element coupled thereto to drive said movable member to move said fluid and a second piezoelectric sensing element coupled thereto to provide feedback related to a fluid parameter.
- 2. The device of claim 1 wherein said second piezoelectric sensing element provides feedback related to fluid viscosity.
- 3. The device of claim 1 wherein said second piezoelectric sensing element provides feedback related to fluid density.
- 4. The device of claim 1 wherein said second piezoelectric sensing element provides feedback related to fluid temperature.
- 5. The device of claim 4 wherein said second piezoelectric sensing element has a thermal expansion coefficient different from that of said first piezoelectric actuator element.
- 6. The device of claim 1 wherein said movable member is a flexible member.
- 7. The device of claim 1 wherein said movable member is a flexible blade.
- 8. The device of claim 1 further including a controller to receive said feedback, said controller controlling operation of said device in response to said feedback.
- 9. The device of claim 8 including a power source controlled to provide a power output signal in response to said feedback.
- 10. The device of claim 8 wherein said controller has calibration data stored in memory relating said feedback to said fluid parameter.



- 12. The method of claim 11 wherein said second piezoelectric sensing element provides feedback related to fluid viscosity.
- 13. The method of claim 11 wherein said second piezoelectric sensing element provides feedback related to fluid density.
- 14. The device of claim 11 wherein said second piezoelectric sensing element provides feedback related to fluid temperature.
- 15. The method of claim 14 including providing said second piezoelectric sensing element with a thermal expansion coefficient different from that of said first piezoelectric actuator element.
- 16. The method of claim 11 further including controlling operation of said device in response to said feedback.
- 17. The method of claim 11 including storing calibration data relating said feedback to said fluid parameter in memory of a controller.